

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for managing semiconductor manufacturing equipment, comprising:

selecting a first process to be performed on a semiconductor substrate in a chamber of the manufacturing equipment wherein the first process produces reaction products in the chamber;

selecting a second process to be performed on a same or another semiconductor substrate in the chamber wherein the second process is for manufacturing the same or another semiconductor substrate, and the second process removes the reaction products in the chamber produced by the first process;

monitoring an amount of the reaction products remaining in the chamber; and
determining an order of performance of the first and second processes based on the monitored amount of the reaction products.

2. (Original) The method according to claim 1, wherein determining the order of performance of the first and second processes includes setting a priority order between the first and the second processes based on the monitored amount of the reaction products.

3. (Original) The method according to claim 2, wherein setting a priority order between the first and the second processes includes, depending on the monitored amount of the reaction products, one of:

setting a priority to the second process over the first process; and
setting a priority to the first process over the second process.

4. (Original) The method according to claim 1, wherein determining the order of performance of the first and second processes includes:

setting a priority to the second process over the first process; and

if the manufacturing equipment is instructed to perform the first process despite the setting of the priority to the second process over the first process, performing cleaning that removes the reaction products remaining in the chamber prior to performing the first process.

5. (Original) The method according to claim 1, wherein monitoring the amount of the reaction products is performed based on a record of performance of the first and the second processes.

6. (Original) The method according to claim 1, wherein monitoring the amount of the reaction products is performed based on a record of performance of the first and the second processes and points that represent production or removal effects of the first and the second processes.

7. (Original) The method according to claim 6, wherein monitoring the amount of the reaction products further includes:

receiving a measurement result indicating a measured amount of the reaction products remaining in the chamber;

comparing the monitored amount with the measured amount; and

adjusting the points based on the result of the comparison.

8. (Original) The method according to claim 1, wherein:

the first process is an etching process using a gas including at least one of chlorine and bromine; and

the second process is an etching process using a gas including at least fluorine.

9. (Original) The method according to claim 8, wherein the gas including fluorine includes SF₆ gas.

10. (Original) The method according to claim 8, wherein the second process is an etching process of a silicon nitride film.

11. (Currently Amended) A system for managing a semiconductor manufacturing line that processes a plurality of lots of wafers, comprising:

at least one semiconductor manufacturing station having a chamber, the manufacturing station performing a first process on a semiconductor substrate that produces reaction products within the chamber and a second process for manufacturing a same or another semiconductor substrate that removes the reaction products inside the chamber produced by the first process and, optionally, a cleaning that removes the reaction products remained within the chamber;

a host computer that manages the manufacturing line;

an individual managing device that manages the manufacturing station, wherein the individual managing device monitoring an amount of the reaction products remaining in the chamber, sets a priority order between the first and the second processes based on the monitored amount of the reaction products, and notifies the host computer of the set priority order,

wherein the host computer determines an order of performing the first and the second processes based on the priority order notified from the individual managing device.

12. (Original) The system according to claim 11, wherein the host computer determines the order of performing based on the priority order notified from the individual managing device and another priority order set in the host computer.

13. (Original) The system according to claim 11, wherein:

the individual management device sets the priority order such that the second process has a higher priority than the first process; and

when the host computer instructs the manufacturing equipment to process a first lot that requires the first process prior to a second lot that requires the second process despite of the notification of the priority order from the individual management device, the individual managing device instructs the manufacturing equipment to perform cleaning prior to processing the first lot.

14. (Original) The system according to claim 11, wherein the individual management device monitors the amount of the reaction products remaining in the chamber based on a record of performing the first and second processes and, optionally, the cleaning.

15. (Original) The system according to claim 14, wherein the individual management device monitors the amount of the reaction products based on the record and points that represent production/removal effects of the first and second processes and, optionally, the cleaning.

16. (Currently Amended) The system according to claim 15, wherein:

the manufacturing station has a measuring device that ~~measures the~~ indicates a measured amount of the reaction products in the chamber; and

the individual management device receives a measurement result indicating the measured amount of the reaction products from the measurement device, compares the monitored amount with the measured amount, and revises the points based on the result of the comparison.

17. (Currently Amended) A method for managing a semiconductor manufacturing station in a manufacturing line for processing a plurality of lots of wafers, the line including an individual management device that manages the manufacturing station, and a host computer that controls the manufacturing line, the method comprising:

selecting a first and a second process to be performed on a same or another semiconductor substrate in a chamber of a manufacturing station, the first process producing reaction products in the chamber and the second process removing the reaction products in the chamber produced by the first process, wherein the second process is for manufacturing the same or another semiconductor substrate;

monitoring, in the individual managing device, an amount of the reaction products remaining in the chamber, and setting a first priority order between the first and the second processes based on the monitored amount of the reaction products; and

selecting, in the host computer, a lot to be processed next by the manufacturing station from the plurality of lots based on the first priority order and a second priority order set in the host computer.

18. (Original) The method according to claim 17, wherein:

the setting sets the first priority such that the second process has a higher priority than the first process; and

the individual management device instructs the manufacturing station, when the host computer selects a first lot that requires the first process as the lot to be processed next despite of the setting of the priority order, to perform cleaning to remove the reaction products remaining in the chamber prior to processing the first lot.